



AMD Developer Forum

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May 2006



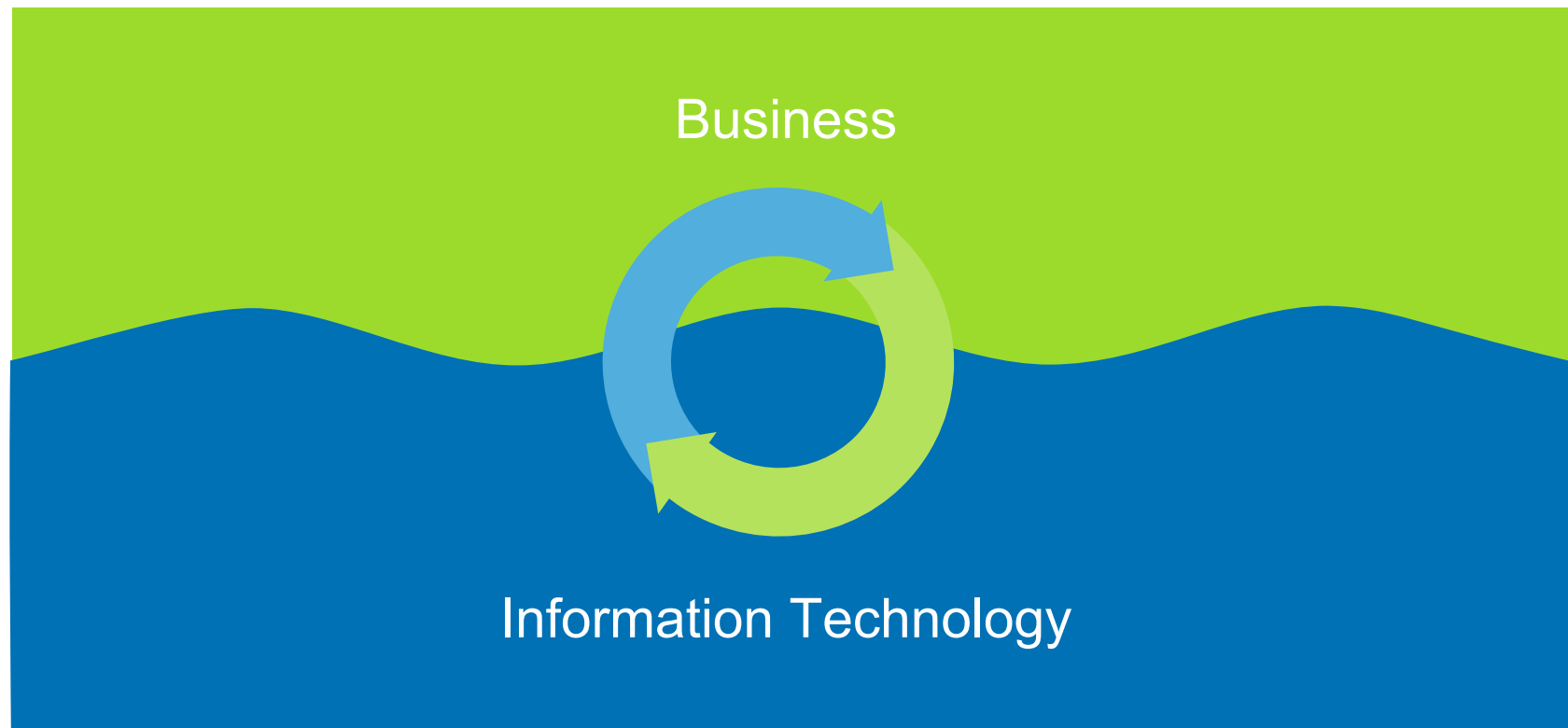
Agenda

- HP vision of Adaptive Enterprise
- Adaptive Infrastructure & its elements
- AMD Value Proposition
- Partnership Strength
- Value to ISV community
- Q & A

Adaptive Enterprise helps CIOs thrive with change ... not just survive change

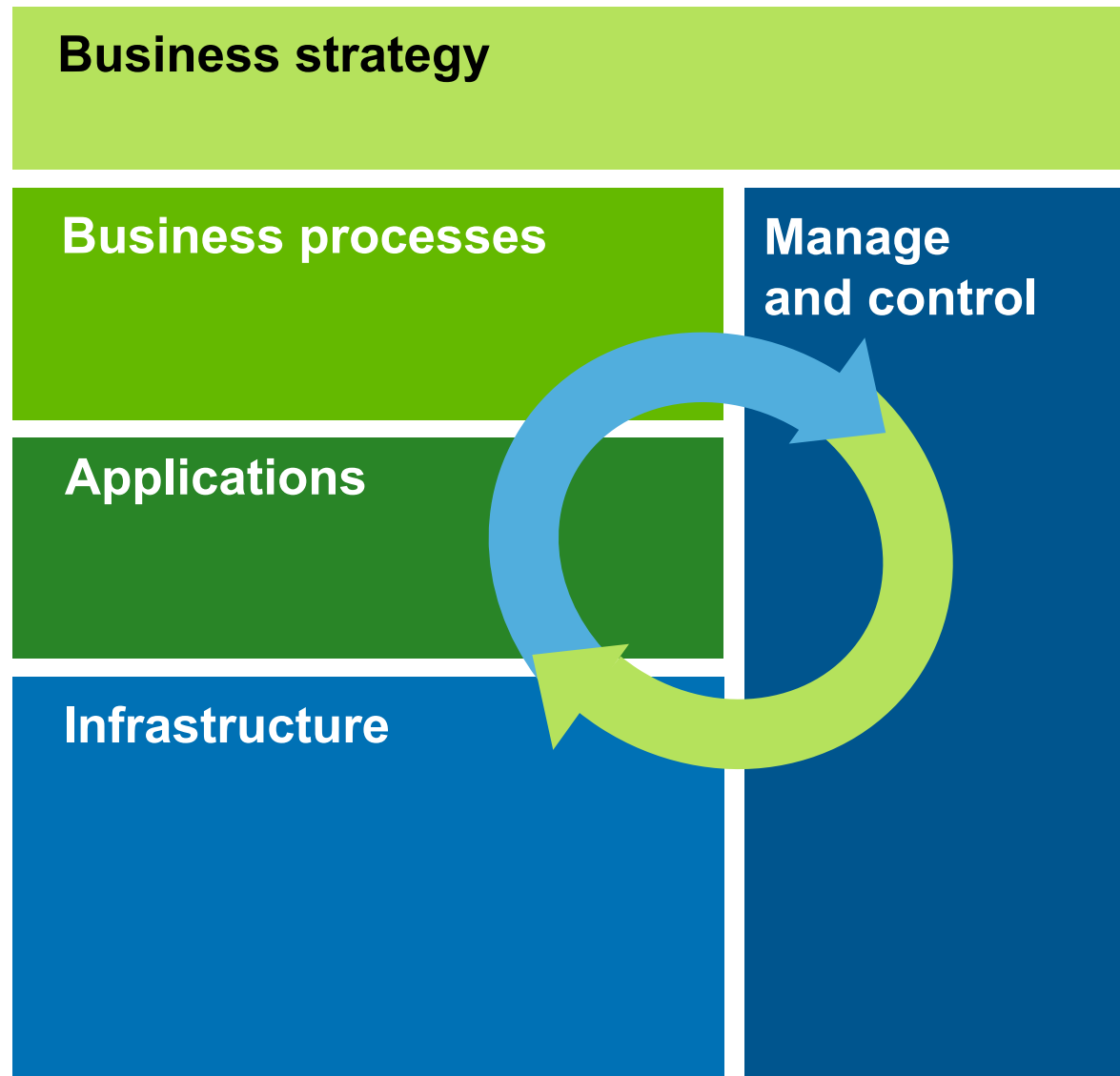


Business and IT synchronized to capitalize on change



Business benefits: simplicity, agility, value

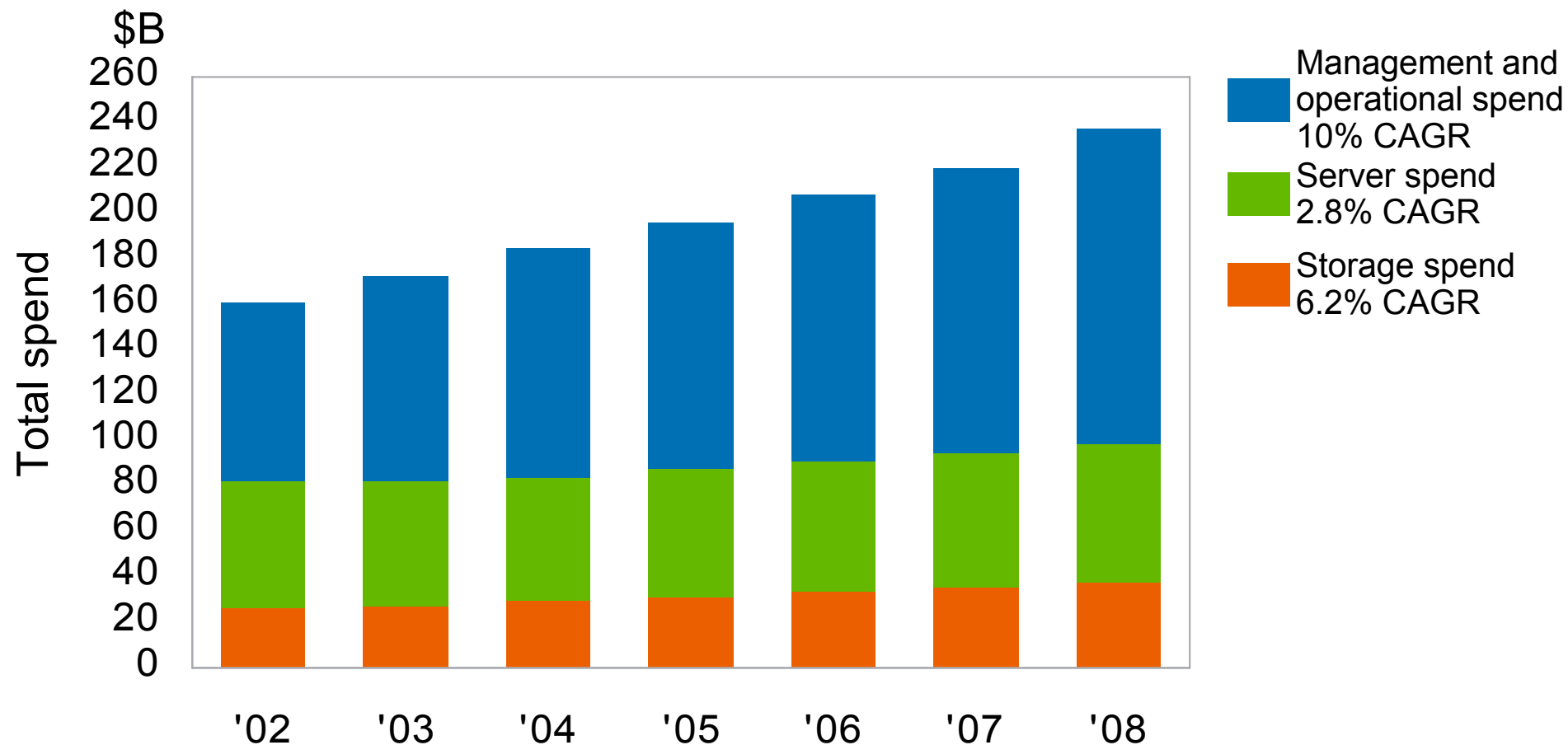
HP's Adaptive Enterprise Architecture



Customer pain points

- “We’ve got too many applications, too much customization and too many underutilized servers.”
- “We struggle to meet service level agreements and fast response times for critical workloads.”
- “Our IT environment is too expensive to manage and maintain.”
- “We can’t implement new projects fast enough.”
- “We’re asked to reduce headcount every year but the work never seems to go away.”
- “Compliance demands are coming and we’re not sure how to react.”
- “How do we know if our infrastructure is at risk to viruses and security breaches?”

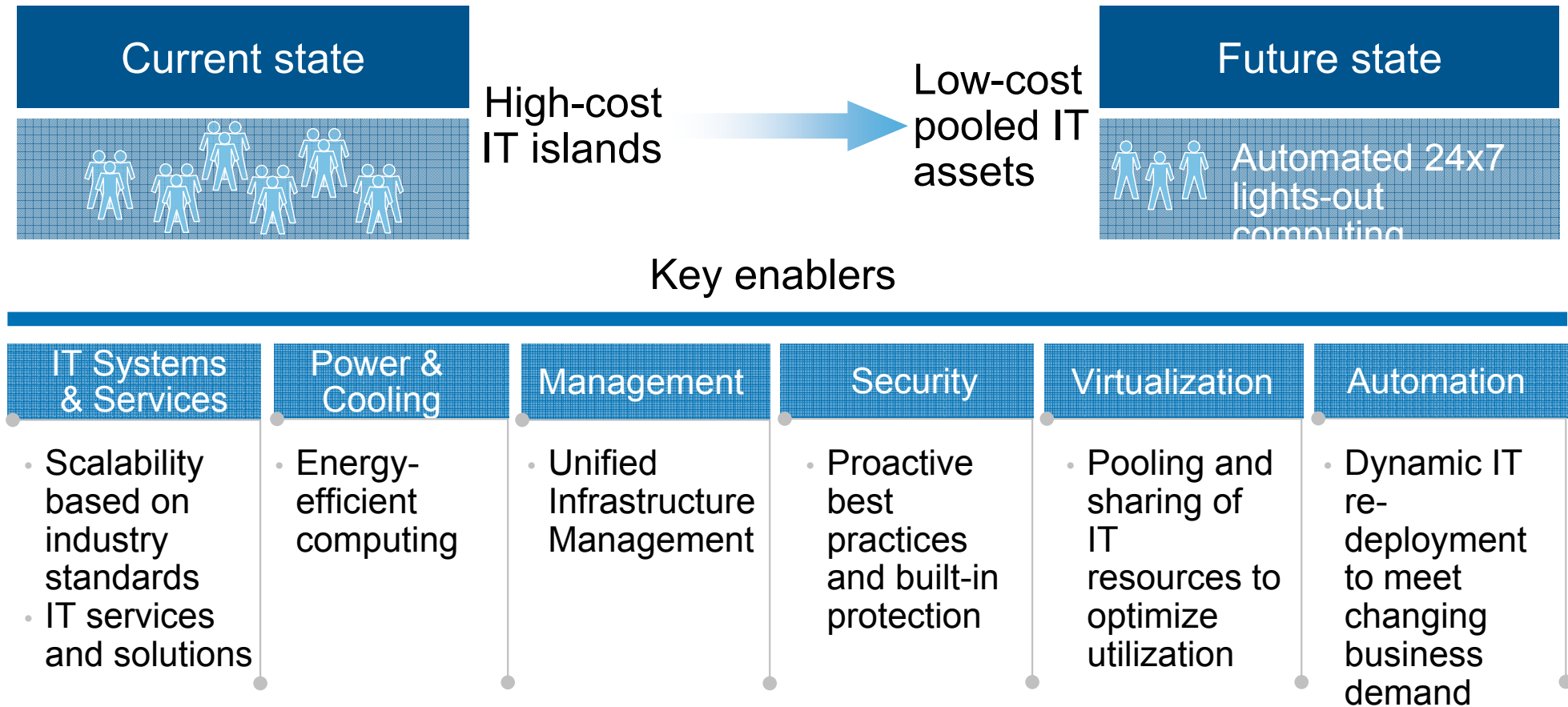
Operational spending growing 3x other systems costs



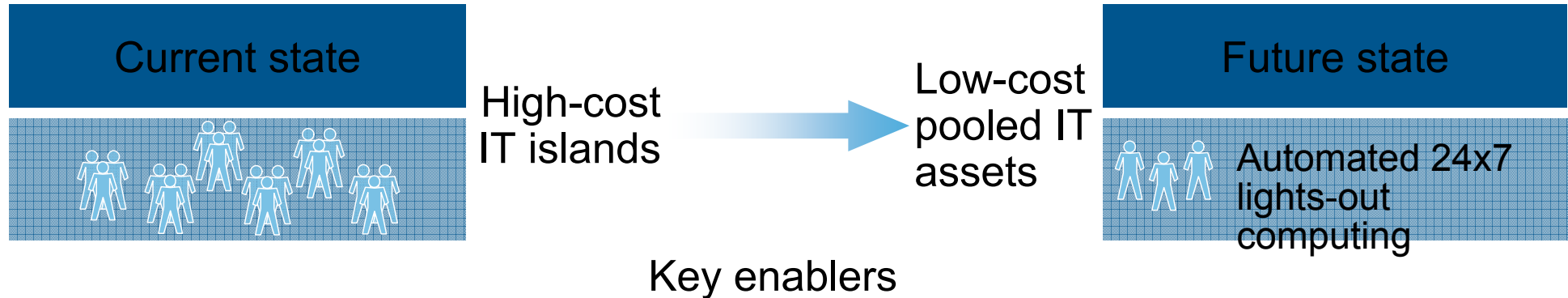
Sources: IDC, "On-Demand Enterprises and Utility Computing: A Current Market Assessment and Outlook," July 2004; HP analysis.
Storage spend includes storage management SW.

Adaptive Infrastructure

Delivering the Next Generation Data Center vision



Adaptive Infrastructure Today



IT Systems & Services	Power & Cooling	Management	Security	Virtualization	Automation
<p>Systems:</p> <ul style="list-style-type: none"> HP BladeSystem HP ProLiant servers HP Integrity servers HP StorageWorks <ul style="list-style-type: none"> - WAN Accelerator - Clustered Gateway <p>Services:</p> <ul style="list-style-type: none"> Agility Assessment Factory Express C & I services Technology Services Managed Services Education & Training Financing services 	<p>Systems:</p> <ul style="list-style-type: none"> Modular Cooling System Power Distribution Unit (PDU) Mgmt Universal Rack infrastructure Integrity power and thermal regulation <p>Services:</p> <ul style="list-style-type: none"> Data Center design, power & cooling Thermal Modeling Environmental Remote Mgmt 	<p>Software:</p> <ul style="list-style-type: none"> Systems Insight Manager HP Essentials <ul style="list-style-type: none"> - ProLiant - Integrity - Storage HP OpenView <ul style="list-style-type: none"> - Infrastructure Mgmt - Service Desk - Asset Mgmt <p>Services:</p> <ul style="list-style-type: none"> IT Service Mgmt Infrastructure Mgmt Data Center Mgmt OpenView services 	<p>Systems:</p> <ul style="list-style-type: none"> Virus Throttling Vulnerability & Patch Mgmt HP-UX 11i security <ul style="list-style-type: none"> - Secure partitions - Intrusion Detection ProCurve Identity Mgr <p>Software:</p> <p>HP OpenView</p> <ul style="list-style-type: none"> - Identity mgmt - Access control - Federated access <p>Services:</p> <ul style="list-style-type: none"> Security Gov & Mgmt IT Security Assessment Security Fd & Training 	<p>Systems:</p> <ul style="list-style-type: none"> Virtual Machine Mgmt Integrity Virt. Machine Virtual Server Env't <ul style="list-style-type: none"> - Capacity Advisor Serviceguard Global Instant Capacity StorageWorks <ul style="list-style-type: none"> - Ent. Virtual Array External storage XP Reference Info Storage System <p>Services:</p> <ul style="list-style-type: none"> Virtualization services Flexible Computing provisioning services Adaptive Network Architecture 	<p>Systems:</p> <ul style="list-style-type: none"> HP BladeSystem Mgmt Virtual Server Env't automation HP Storage Essentials AutoStore HP OpenView <ul style="list-style-type: none"> - Configuration Mgmt - Service Activator <p>Services:</p> <ul style="list-style-type: none"> Automation services Integrated Service Management Remote monitoring and mgmt. Mission critical support

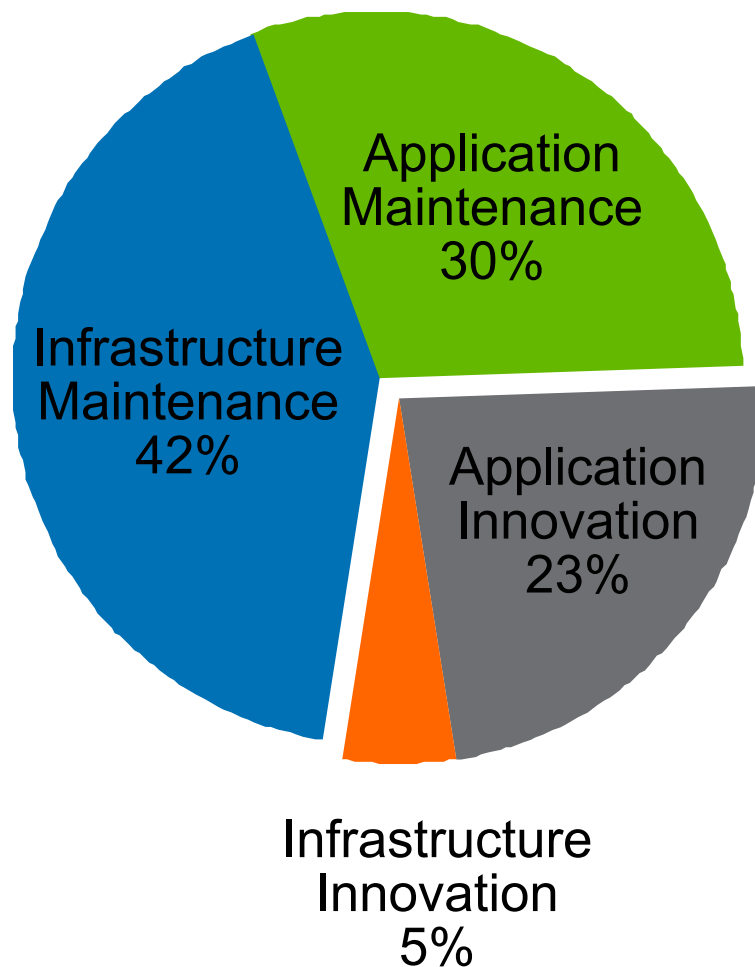
HP uniquely positioned to deliver Adaptive Infrastructure

- Software enables it
 - Management software leadership with HP OpenView, Systems Insight Manager, and HP Integrity, ProLiant and Storage Essentials
 - Investing in security, automation and virtualization
 - Extending the portfolio through acquisitions
- Services delivers it
 - Sourcing flexibility
 - Integrated portfolio
 - Global delivery
- Storage systems fortify it
 - Continuous and secure access to information
 - HP StorageWorks leadership in storage virtualization and management technologies
- Innovative, standardized servers power it
 - Modular scale up and scale out
 - HP BladeSystem thought leadership
- R&D innovations drive it
- HP IT uses it

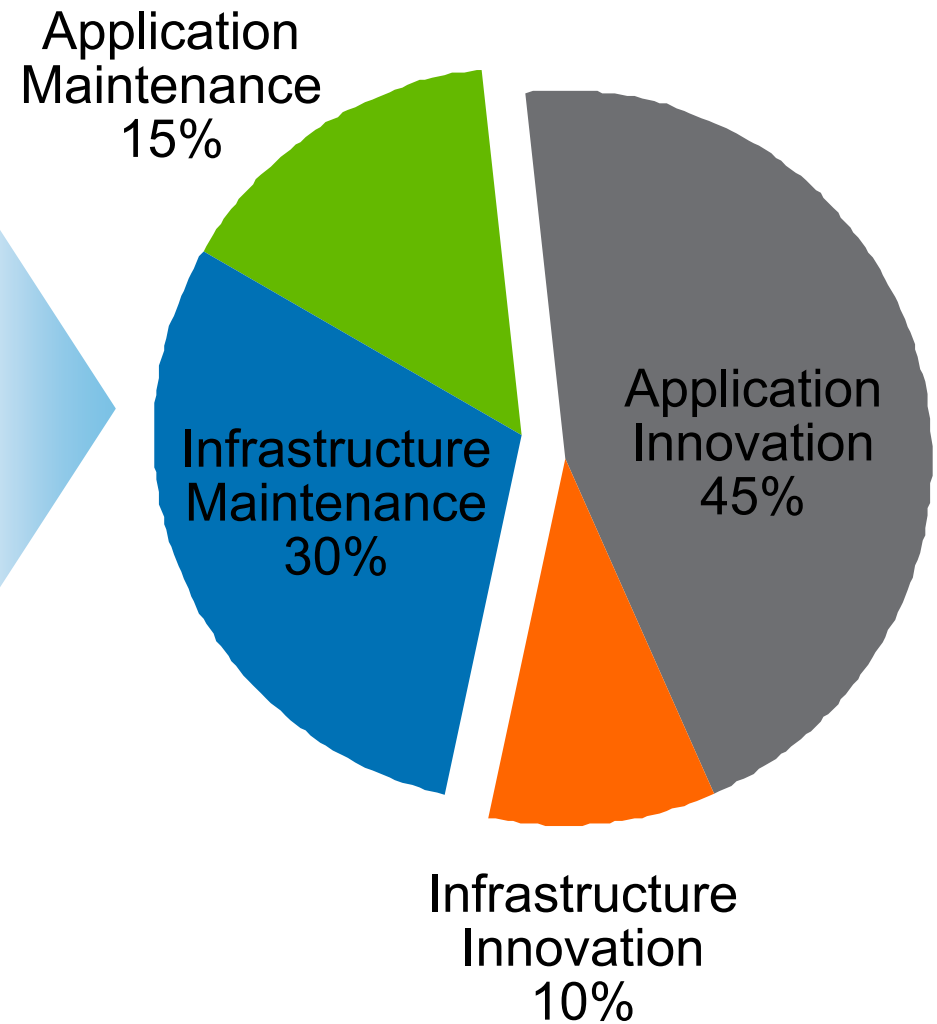
HP: moving from maintenance to innovation



IT Current State

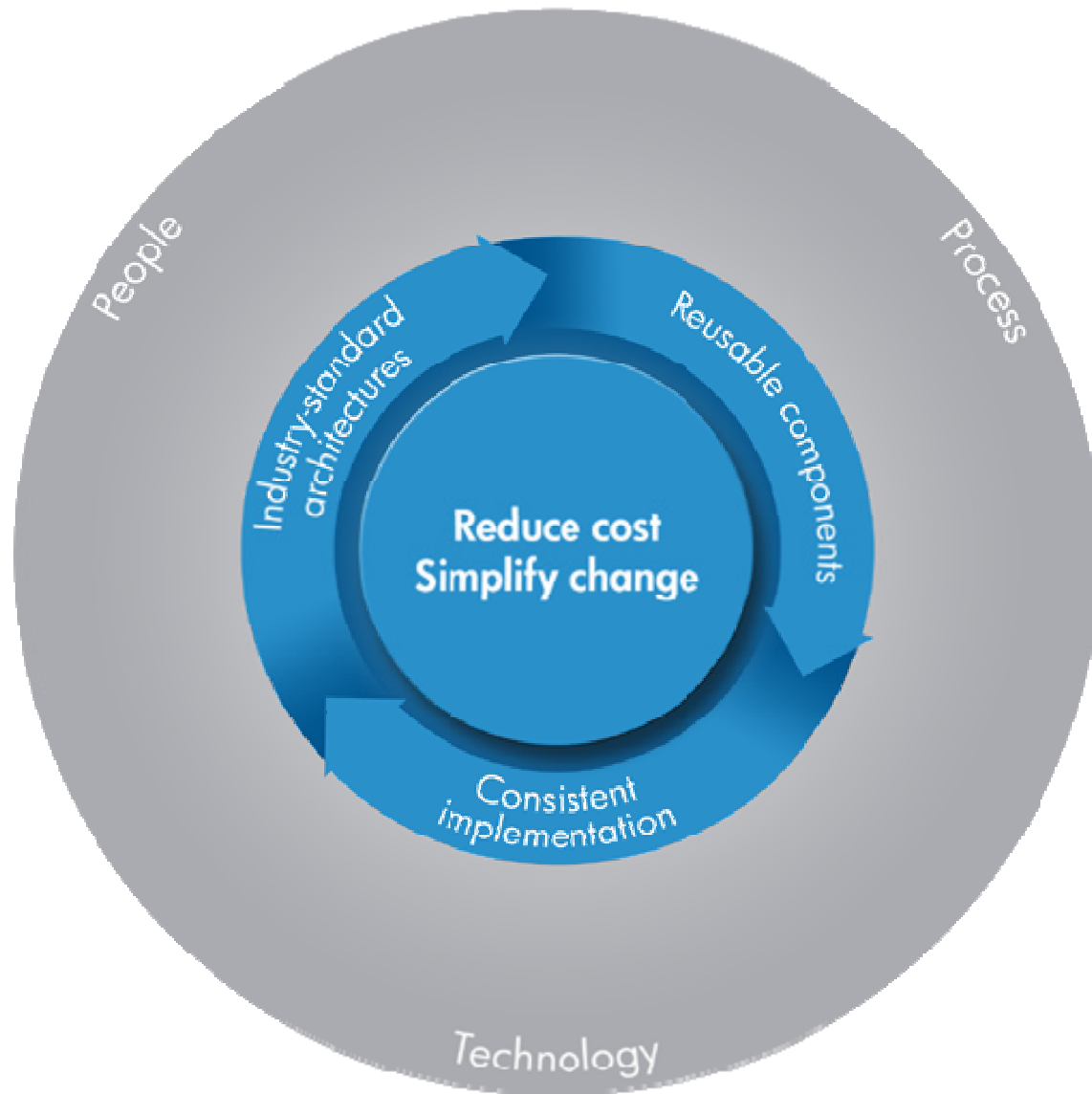


IT Future State

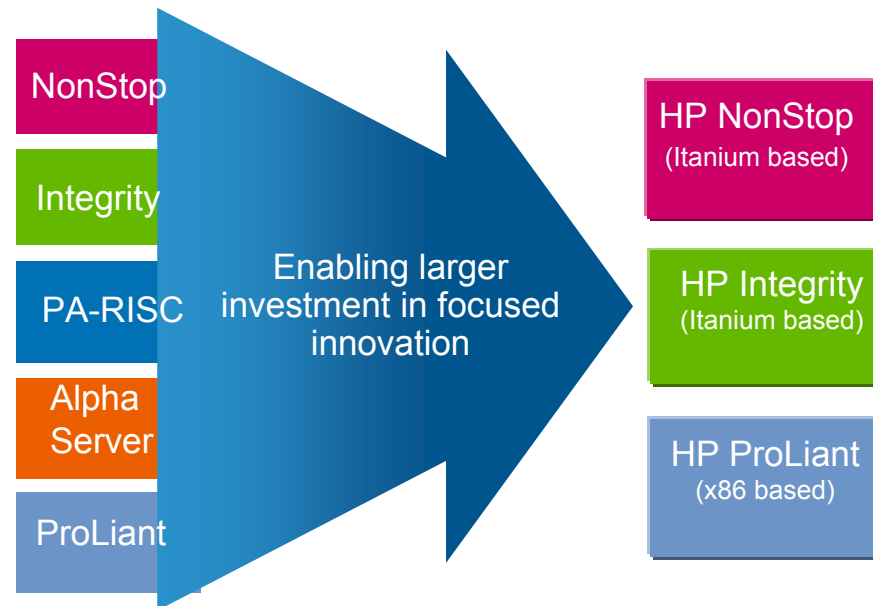


Source: HP IT department, 2004

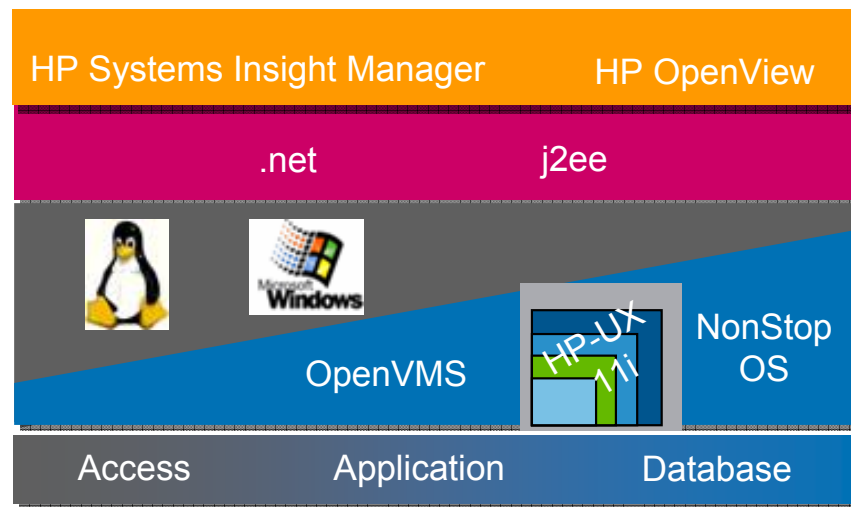
A holistic approach: Standardization



Standards-based platform strategy



Multi-OS strategy



Industry Standard Processors



Our range of Opteron Servers



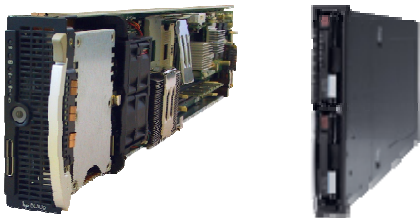
DL 585 – 4 socket, up to 8 cores, up to 64 GB memory,
6 PCI-X 100 MB/s & 2 PCI-X 133MB/s, 6 Disk



DL 385 – 2 socket, up to 4 cores, up to 32 GB memory,
4 PCI-X, 6 320 SCSI Disk or 8 SATA Disk



DL 145 – 1 socket, up to 16 GB memory, 6 PCI-X, 6 Disk



BL 35P – 2 socket, up to 4 cores, up to 16 GB memory

BL 25P – 2 socket, up to 4 cores, up to 16 GB memory

Current DL585 leading benchmarks

- Mail and messaging:
 - **Exchange MMB3** : HP ProLiant DL585 - 10,200 users
 - **No. 1 benchmark - Lotus Notes**: HP ProLiant DL585 – 26,000 R6 mail users @ \$3.45
- **SAP:**
 - SAP SD 2 Tier – 5,100 users (4 core)
 - SAP SD 2 Tier – 8,900 users (8 core)
- **TPC-C:**
 - 130,623 TPC-C @ \$2.80 (4 core)
 - 202,537 TPC-C @ \$2.04 (8 core)

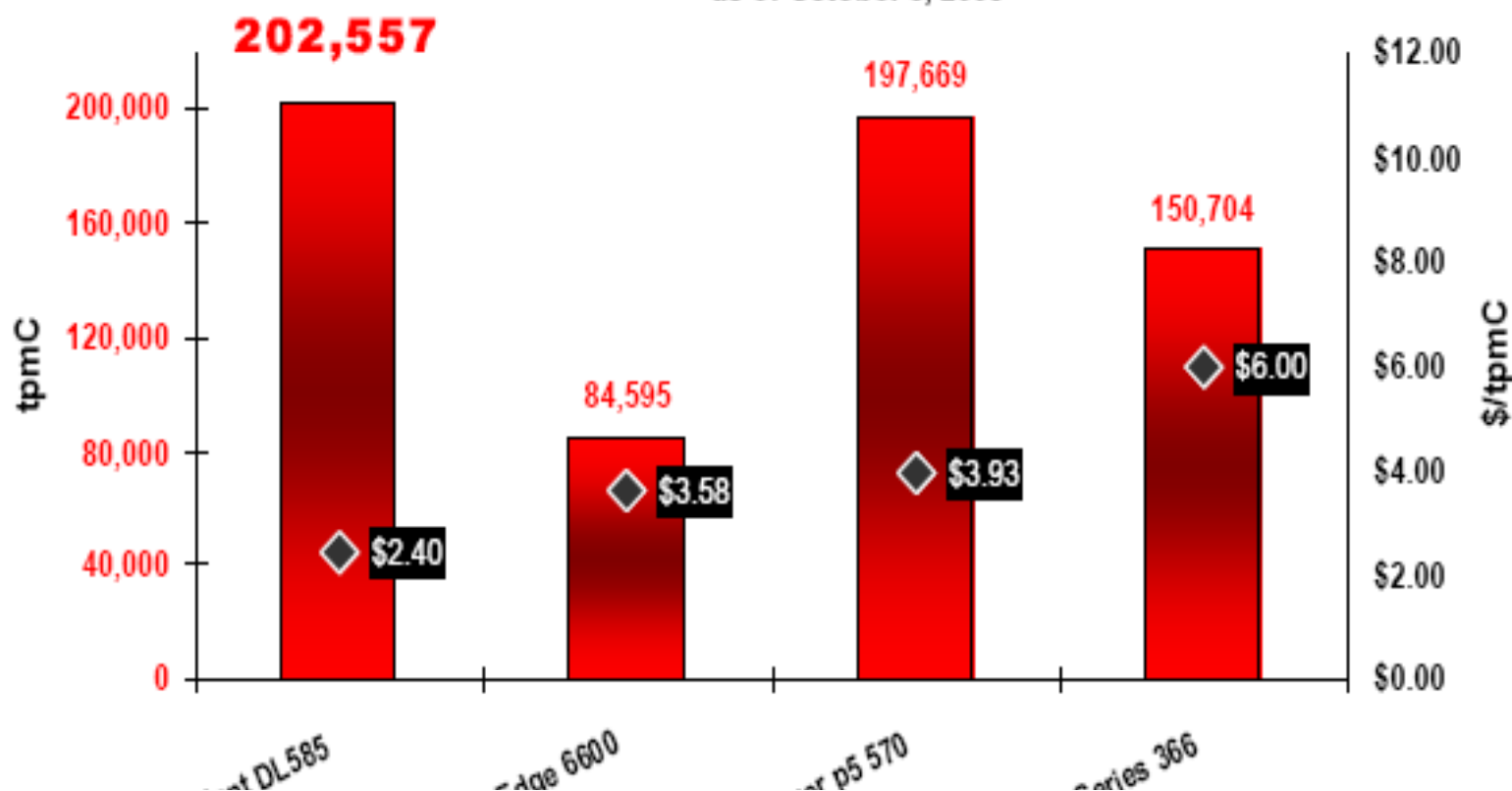


HP ProLiant DL585 Takes #1 4-P TPC-C



- First time a 4-Processor system breaks **+200K tpmC**
- **#1** 4-Processor TPC-C Result
- Beats IBM's Power-5 4-P Result @ **67% less cost**
- **34% Faster** than the best 4-P IBM 366 xSeries @ less than 1/2 the **Cost**
- Beats Dell's Best 4-P result by **over 2X**
- Utilized Microsoft's new *SQL Server 2005 – 64 bit product*

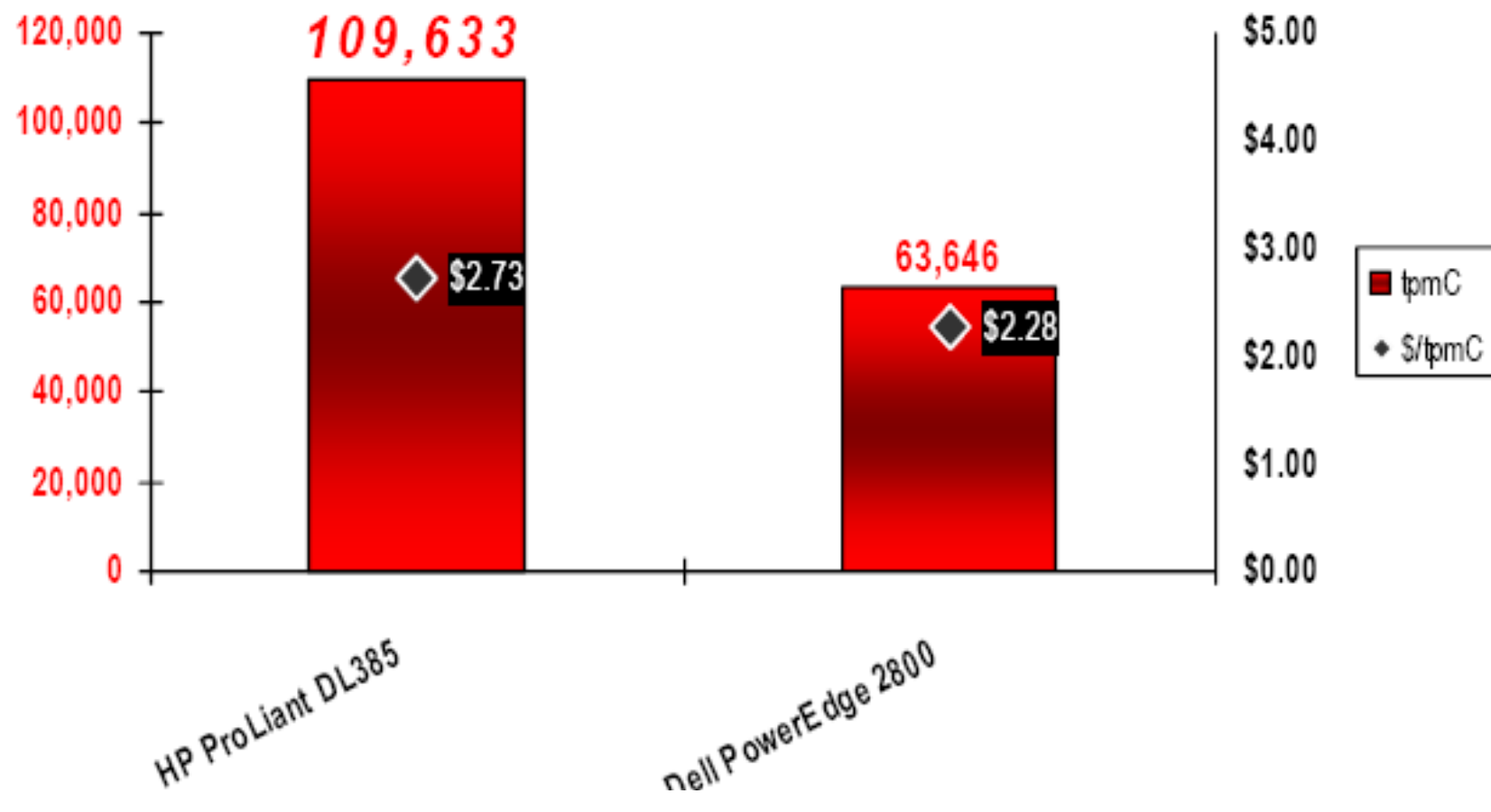
Four-processor results on TPC-C benchmark
as of October 5, 2005



HP ProLiant DL385 Takes #1 2-P TPC-C

- First time a 2-Processor system breaks **+100K tpmC**
- **#1** 2-Processor TPC-C Result
- Beats Dell's Best 2-P result by **72%**
- Utilized Microsoft's new *SQL Server 2005*

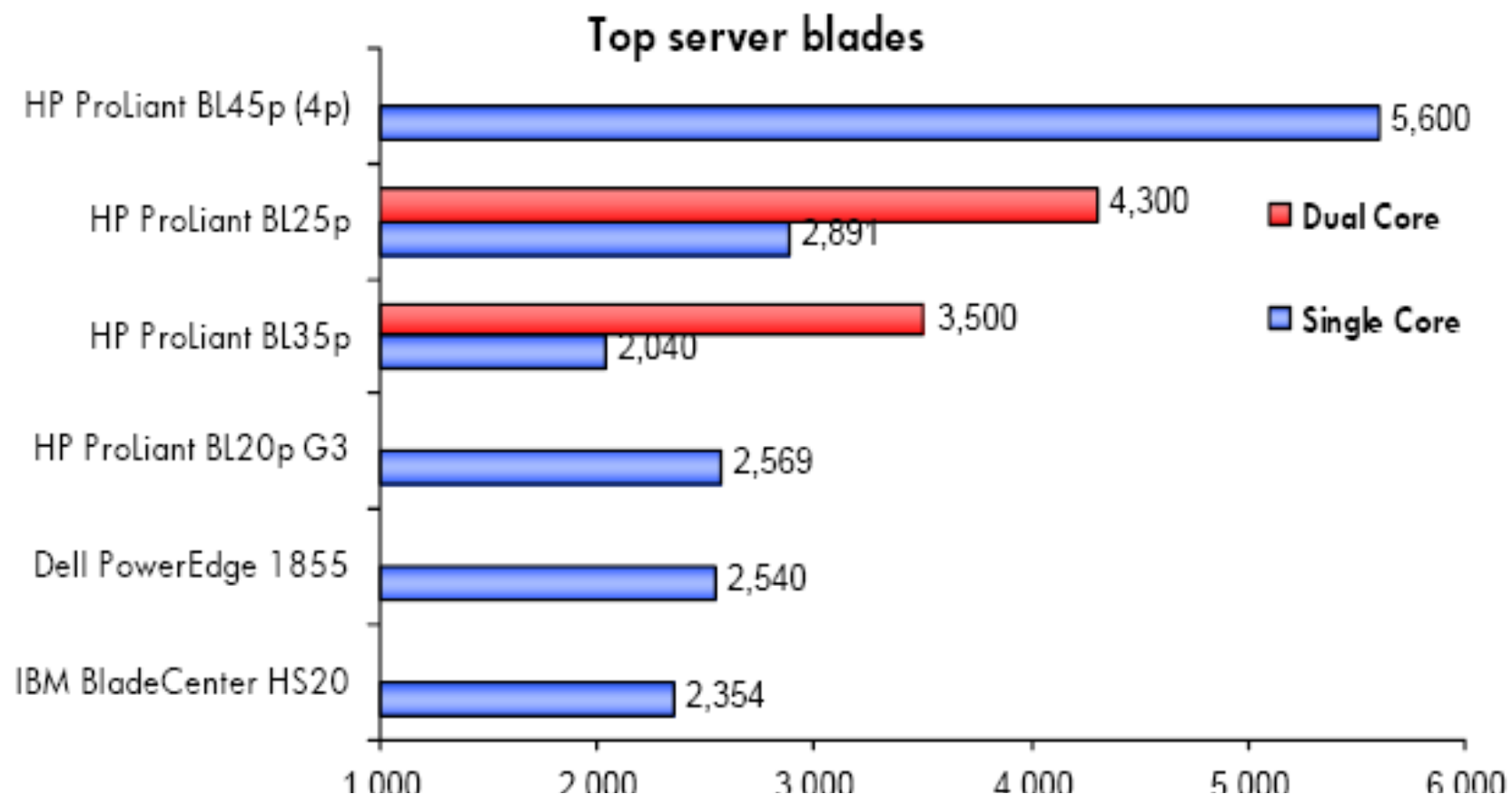
Two-processor results on TPC-C benchmark
as of October 5, 2005



HP ProLiant Blades achieve the Top 3 2-P and #1 4-P Blade Performance Leadership on SPECweb99_SSL



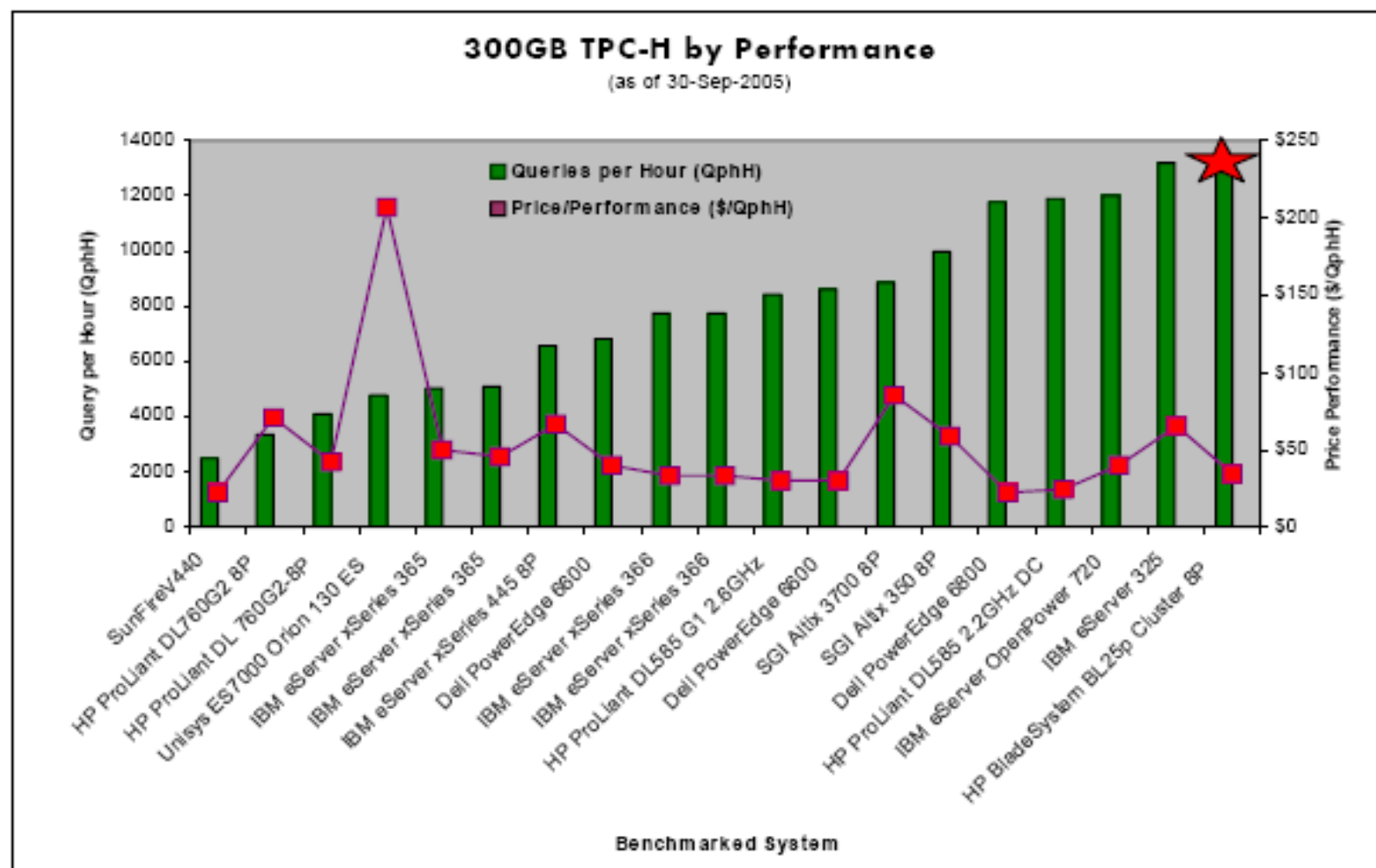
- First time a 4-Processor system breaks **+5000 CC**
- **#1** 4-Processor Blade SPECweb99_SSL Result
- **#1** 2-Processor Blade SPECweb99_SSL Result
- The BL25p Dual Core is almost **2X** the performance of the Best IBM and Dell 2-P Blade results



HP ProLiant BL25p Blade Cluster Grid breaks TPC-H 300GB #1 Performance Record (cont.)



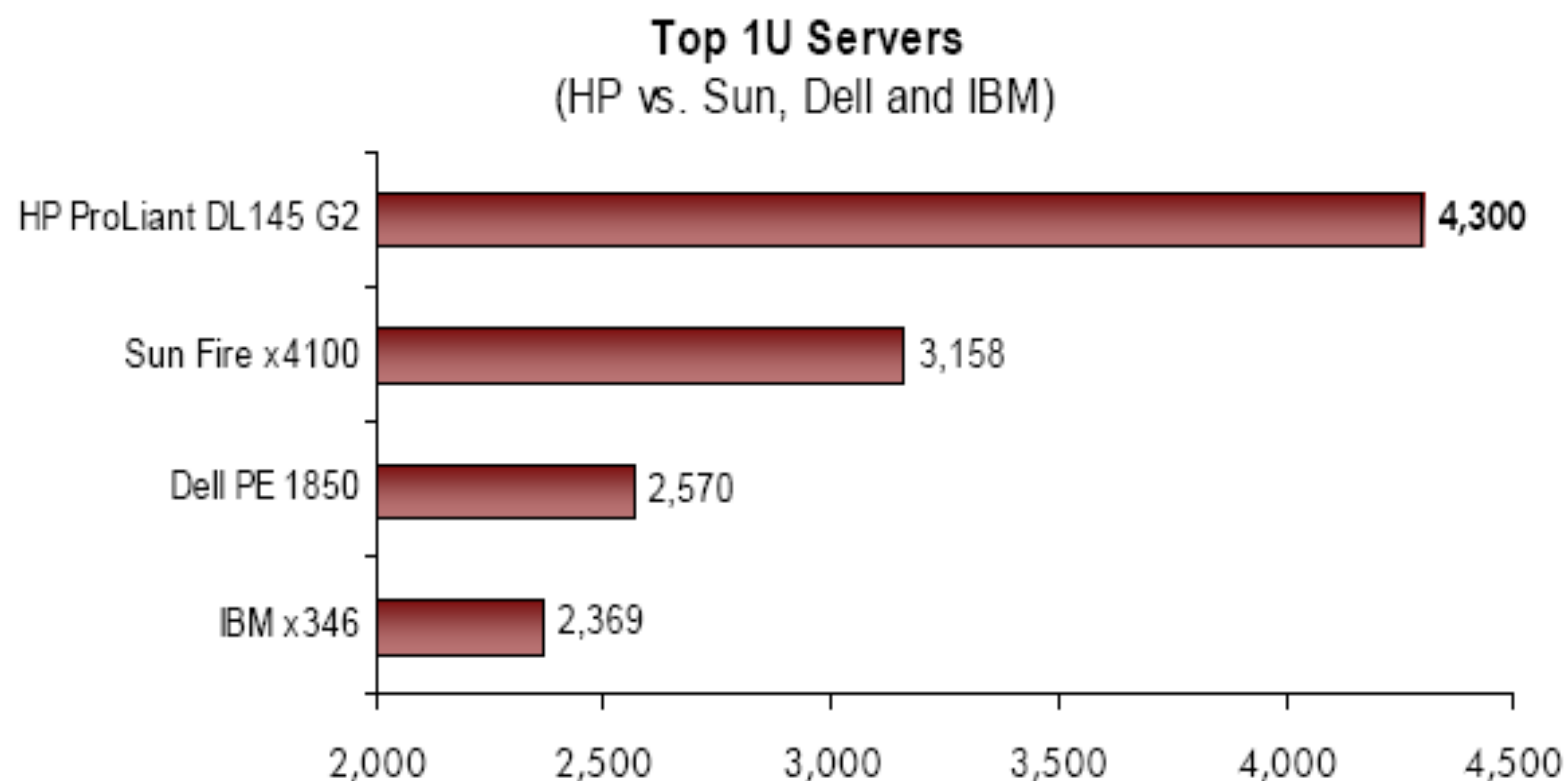
- First time a Blade system is used in a TPC-H “true” Grid computing environment
- #1 TPC-H 300GB result
- Beats IBM xSeries as well as Power 5 results
- Database: *Oracle's 10G RAC on Red Hat Linux (RHEL-4)*
- Operating System: *Red Hat Linux (RHEL-4)*



HP ProLiant DL145 G2 - fastest 1U server on the SPECweb99_SSL benchmark

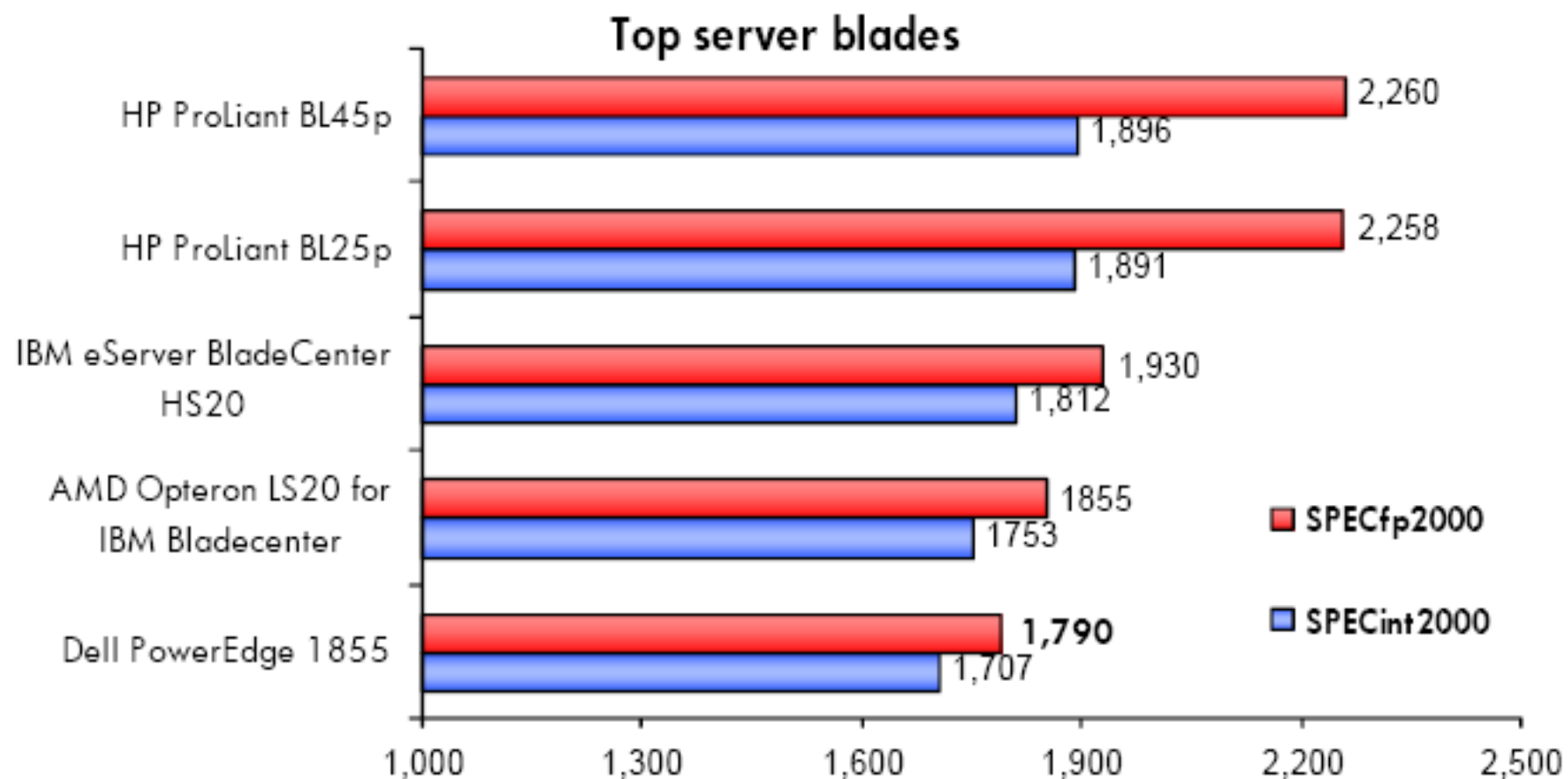


- First time a 1U system breaks **+4000 CC**
- #1 1U SPECweb99_SSL Result
- Beats Sun's Best 1U Sun Fire x4100 Result by **over 36%**
- **67% Faster** than the best 1U Dell PE1850
- Beats IBM's Best 1U result by **over 80%**



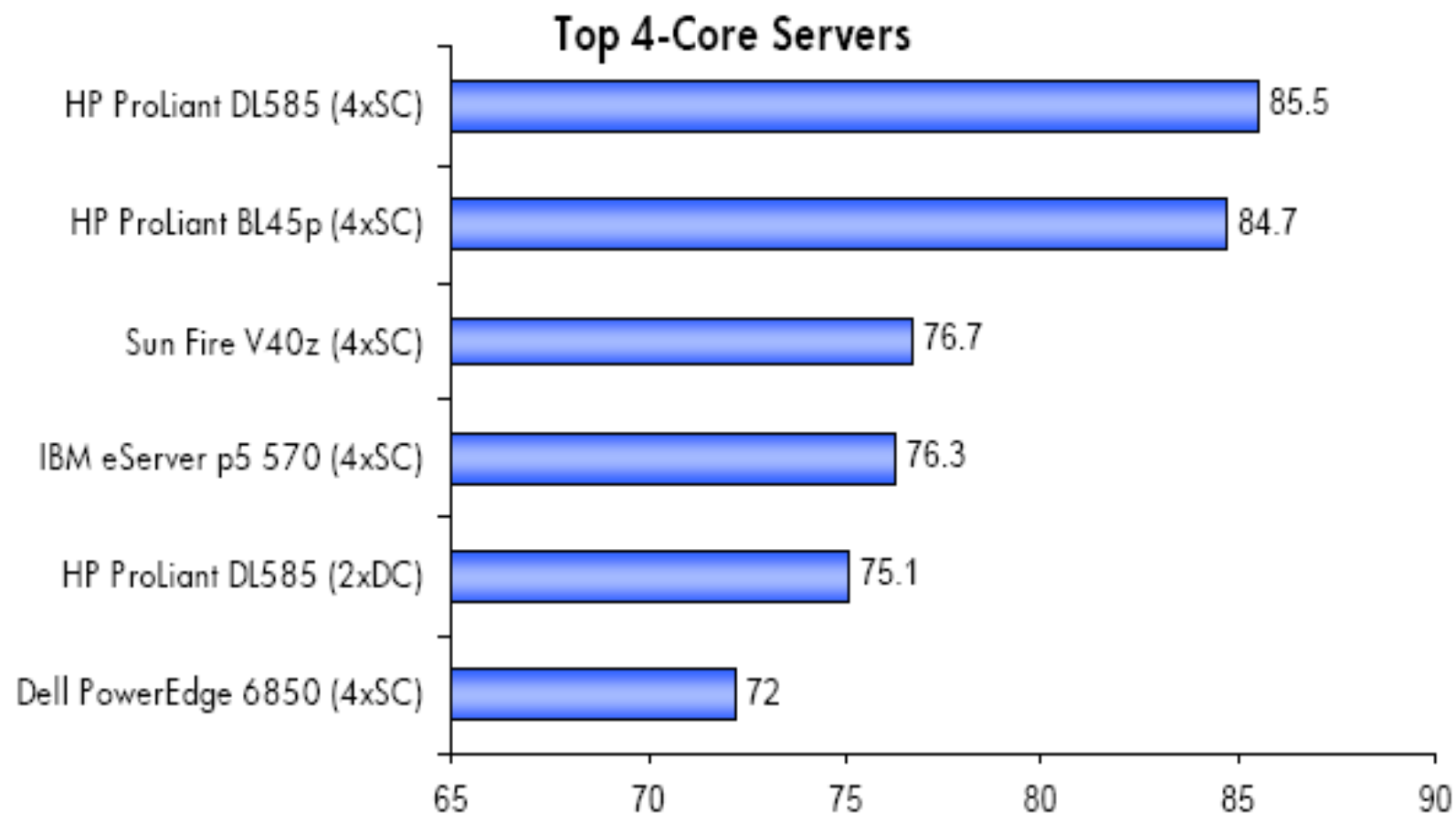
HP ProLiant Blades #1 Blade SPECint2000 and SPECfp2000

- **#1** Blade SPECint2000 and SPECfp2000
- Beats IBM's Best Blade fp Result by **17%**
- Beats Dell's Best Blade fp Result by **26%**



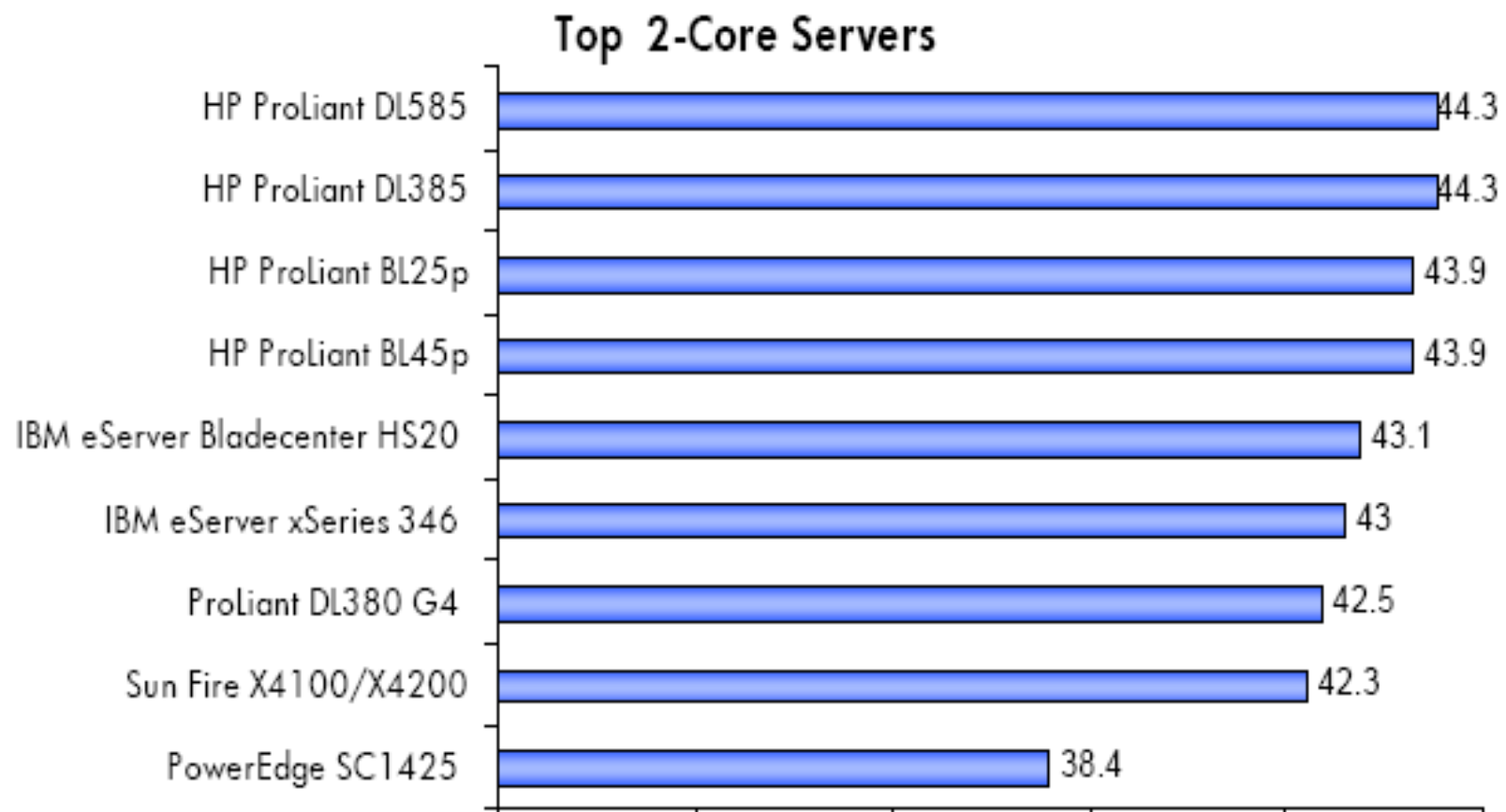
HP ProLiant Servers #1 4-Core SPECint_rate2000

- **#1** 4-core SPECint_rate2000
- Beats IBM's Best 4-core Power5 result by **12%**
- Beats Dell's Best 4-core result by **18%**

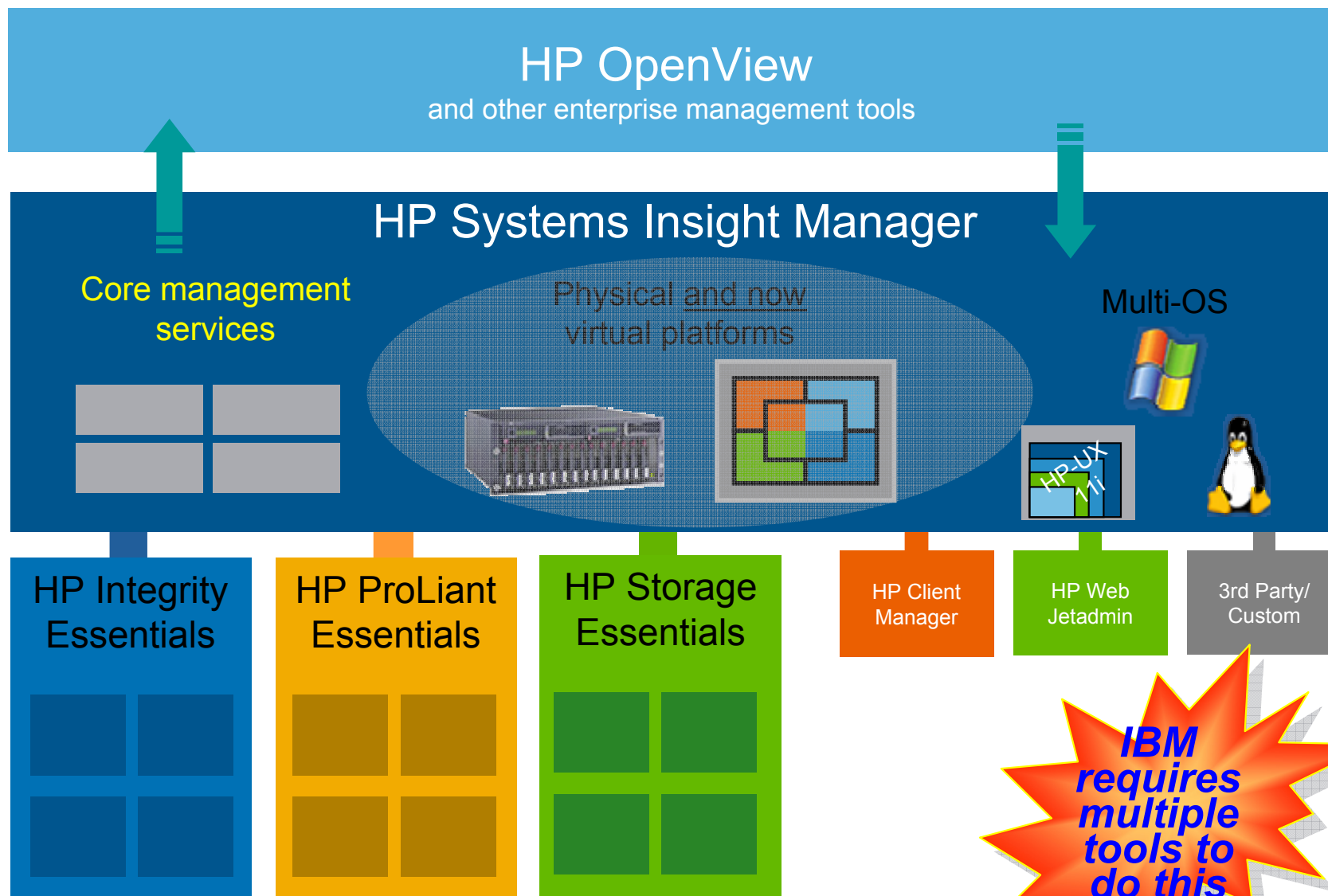


HP ProLiant Servers #1 2-Core SPECint_rate2000

- **#1** 2-core SPECint_rate2000
- Beats IBM's Best 2-core result by **3%**
- Beats Dell's Best 2-core result by **15%**



Our Unified Infrastructure Management

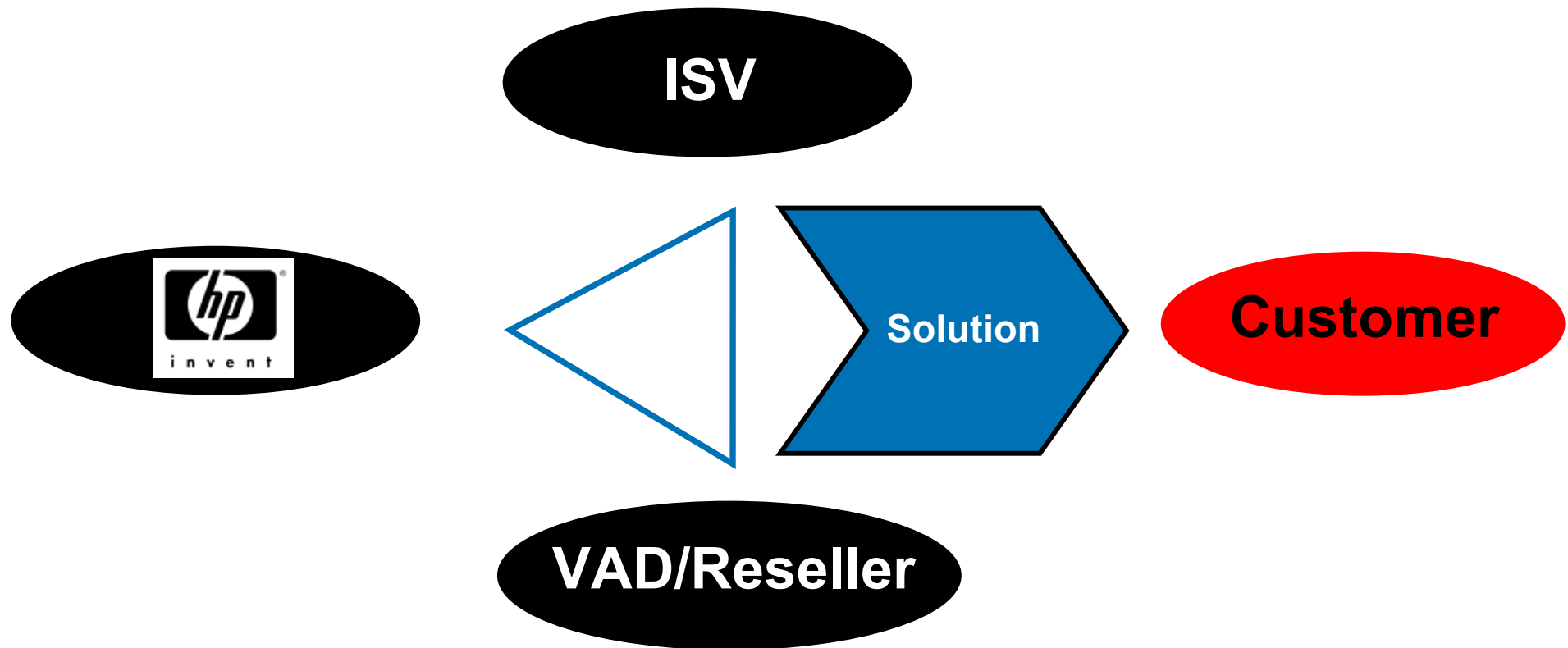


HP Systems Insight Manager – one platform unifies it all

HP & AMD Partnership

- HP is the largest partner for AMD – WW & in India
- HP has the largest portfolio of consumer & commercial desktops, consumer & commercial laptops & industry standard servers.
- Within Server family HP has the widest range of rack mount & blade Servers based on AMD processor
- Strong engineering value add – the goodness of Proliant
- Benefits of Manageability, virtualization, automation, standardization
- Absolute Performance Leadership
- Close field alignment
- Common Solution Centers

What is Alliance One ?



Why Alliance One ?

- A powerful alliance of ISV, HP Resellers & HP
- Create value for the customer, reseller, ISV and HP
- Bridge the **Go-to-market** gap for ISV. The reseller's reach is the force multiplier for market access.
- Bridge the **Value** gap for Reseller. The ISV solution provides value and offer better customer intimacy.
- Bridge the **Solution Offering** gap for HP. The ISV & Reseller triangulation help address market better.



Thank you

